F1-324

I. Executive Summary

Project Title: Interactive Model for Wetland and Agricultural Landscapes in the Delta

Applicant: Ducks Unlimited, Inc.

Project Description: This project will compile a common set of GIS data layers and develop a user-friendly analysis tool, Spatial Decision Support System (SDSS), for use by Delta stackholders to aid in planning and management decisions.

Approach/Tasks/Schedule: This project will be completed by: (1) surveying, compiling and developing metadata for all available spatial data; (2) determine stakeholder needs; (3) standardize, rectify, geocode, and document spatial data; (4) design and program the Spatial Data Support System; (5) test, modify, and disseminate the SDSS. The project will begin in late 1997 and will be completed by the end of 1999. The SDSS (which is both the GIS data layers as well as the programmed analysis tools working in the ArcView/Windows environment) will be mastered onto CD-ROM. If desired the SDSS can also be posted to a WEB site and/or mastered onto the newer DVD format.

Justification: While most environmental and land planning data sets are spatial in nature, often the skill and resources necessary to use such complex GIS software systems are not available to the vast majority of stakeholders. These Delta stakeholders may be experts and decision makers in vastly diverse fields, but with limited experience in complex computing environments. The development of a user-friendly analysis tool, the SDSS, will allow Delta stakeholders to use ranked, interactive data for land use planning.

Budget Costs and Third Party Impacts: Total funding requested is for $255,560. Partial cost break down includes: (1) GIS metadata development - $66,740; (2) development and programming of interactive SDSS - $147,220; (3) consensus building with Delta stackholders - $41,600.

Applicant Qualifications: Ducks Unlimited is a nationally recognized authority on wetlands and waterbird use. The Western Regional Office has full capabilities and has mapped over 70 million acres of habitat in California (including the Delta region), Alaska, Pacific Northwest, and Canada in the last 10 years. Du has recently completed development of a SDSS for Yolo County.

Monitoring and Data Evaluation: These metadata sets can be updated for the model on a regular basis and imputed in the model without major additional expense. This project is a tool for monitoring and conservation planning.

Support/Coordination: Previous development of SDSS for Yolo County was supported by the Irvine Foundation and Yolo County. Additional data layers were supplied by California Department of Fish and Game, CA Dept. of Conservation, EPA, USFWS, NRCS, and BOR. The proposed SDSS will benefit from data layers from the afore mentioned agencies, MET, Delta counties, and others.

II. Title Page

Title of Project:

Interactive Model for Wetland and Agricultural Landscapes in the Delta

Name of Applicant:

Ducks Unlimited, Inc.
Western Regional Office
3074 Gold Canal Drive
Rancho Cordova, California 95670-6116
Tel (916) 852-2000 Fax (916) 852-2200 email: wroducks@gte.net

Principal Investigators: Robb Macleod – GIS Manager
Frederic Reid, Ph.D., Director of Conservation Planning

Type of Organization and Tax Status: Non Profit (501-C3)

Tax Identification Number: 13-5643799

Participants: Ducks Unlimited

RFP Project Type: Monitoring, Assessment, and Reporting

III. Project Description

Project Description and Approach

As one of the largest delta complexes on the west coast of North America, the Sacramento \ San Joaquin Delta is also surrounded by large and expanding urban concentrations as well as some of the most intensive agricultural land use in North America. This complex of waterways, wetlands and islands clearly require careful management both to preserve and restore natural habitat as well as to vigilantly monitor and direct the development of the urban\wetland interface. Successful management requires a common and valid base of environmental and sociological data and analysis tools that can be accessed and used by the many participants, or stakeholders, in the Delta region. Most of these data are fundamentally spatial in nature; consequently analysis tools need to be in place that can operate on spatial data. While these sophisticated analysis tools are commonly found in G.I.S. (Geographic Information System) software, often the skill and resources necessary to use such complex software systems are not available to the vast majority of stakeholders, who may be experts and decision makers in vastly diverse fields with very limited experience with GIS or complex computing environments. Newer generation software and software programming tools, however, are now available that allow GIS functions and complex analysis to be performed by wholly unsophisticated users. Thus, the power of GIS and spatial data analysis can be used by specialists in many fields without any explicit training in GIS. The purpose of this project is to compile a common set of GIS data layers and develop user-friendly analysis tools for use by Delta stakeholders to aid in planning and management decisions.

The task and user centered nature of such a system is fundamentally different than that of a GIS system. A GIS typically requires GIS system software experts to translate user requirements into system functionality, operate the complex software and hardware necessary to achieve the results, deliver some answer or product to the user, and finally explain how it was achieved. Because of the different nature of such as user and task oriented system, it is called a Spatial Decision Support System, or SDSS to differentiate it from the more complex and specialist oriented GIS systems.

For the various stakeholders in the Delta region decision making, SDSS capabilities and a common set of baseline data are clearly necessary. In addition, it is important that all stakeholders be able to easily and interactively use such a SDSS. This implies that the same data base and software tools be available to all stakeholders at their own location, and not be located at only a single site.

Two phases are proposed for this project:

Phase 1: Compile and develop a common and comprehensive spatial database for the Delta area consisting of existing spatial data layers. It is not the intention of this proposal to generate new data layers. Rather, we will conduct a search for existing data layers held by various public, private, and academic sources and compile them into a

standardized format for use in an interactive model. The data layers will be acquired, documented, and formatted into appropriate file structure for use on a PC-based SDSS. To acquire the data layers, we will work cooperatively with the various public agencies and private entities as we have successfully done in the past. Once this data has been documented and prepared so that it can be used interchangeably by the SDSS, it will be mastered onto CD ROM for distribution. In the future, it can also be placed on the WEB or mastered onto the newer DVD format for multimedia use.

Phase 2: Survey stakeholders as to analysis requirements and develop a Spatial Decision Support System that functions as a user friendly, task oriented front end to the common and relatively inexpensive Arcview GIS software. Arcview has been demonstrated to be very stable and capable in the Windows computing environment; in addition Visual Basic and Arcview's own Avenue programming language are ideal and advanced tools to use for developing a highly capable and flexible SDSS for the Bay and Delta area stakeholder community. A prototype of such an SDSS has already been completed for Yolo county and is currently undergoing review by the user community.

Location and Geographic Boundaries of Project

This project will focus on the Sacramento/San Joaquin Delta and will be defined by the Central Valley Habitat Joint Venture boundaries for the Delta basin. This area is bounded by the American River on the north, the San Joaquin River on the south, the Sacramento River Deep Water Ship Channel on the east, and the 300 foot elevation contour on the west. The Sacramento/San Joaquin Delta consists of a large complex of inlets at the confluence of the Sacramento and San Joaquin Rivers. Historically, this was once largely tidal marshland. Today most of the remaining wetlands consist of small midchannel tidal marshes. Most of the islands have been leveed and are used for agricultural production. Flooding of these agricultural lands can provide important secondary habitat for wintering waterfowl. However, this supplemental habitat is jeopardized by the increasing competition for water and changing agricultural practices.

Expected Benefits

This project will have a variety of benefits for the various governmental bodies and citizen interest groups that have a stake in the successful management of the Delta area. The greatest benefit will be the development of a standardized set of baseline spatial data by which progress can be measured and decisions evaluated. Several agencies and non-profiit groups already have acquired considerable spatial data covering issues of interest in the Delta. However, this data is retained in various offices scattered throughout the state, and is often stored on different media, in different software formats, and uses different geographic coordinate systems. At the current time, there is no agreed-on baseline data base that contains the most current data from each agency that is projected at a consistent scale, and coordinate system, and is in a consistent format that all users can access and easily utilize.

A common and well documented format will also be able to be readily modified and added to when new data is available. For instance, if new satellite imagery is acquired at a future date, then a common and well documented coordinate system and projection of the existing spatial data will allow the satellite data to be used to update the older, pre-existing spatial data with ease. As new spatial data sets are made available by various researchers, they too can be incorporated and used in conjunction with the preexisting data in order to conduct spatial analysis.

Using this data base and the Spatial Decision Support System tools provided, all stakeholders and interested citizens will be able to conduct spatial queries and "what-if" scenario modeling on a real time basis. For example, as digital flood prediction maps are released by FEMA, it will only take a matter of minutes for the unskilled operator to be able to tabulate by governmental jurisdiction the total affect on the arable land acreage and also on the taxable land base using the SDSS.

Whatever the proposed management scenario, the SDSS will be able to take advantage of Arcview's excellent graphic output capabilities to provide for robust and effective graphics that will allow the user as well as various citizen groups to visualize the complex Delta natural and constructed environment. At the current time, consensus building is a difficult, yet mandatory requirement for management. Effective and versatile color map graphics that can be disseminated on the Web, displayed from a portable computer, or distributed as hardcopy maps, have been shown to be critical in helping establish a consensus by clearly illustrating the actual situation as well as proposed land uses or management practices. In addition to this versatile mapping capability, multimedia graphics such as photographs, charts, video clips and tables can readily be incorporated into Arcview for visualization purposes.

Background and Biological/Technical Justification

Given the competing interests in the Delta, SDSS capabilities and a common set of baseline data are clearly necessary. In the past there have been two factors standing in the way of this goal. First, the existing spatial databases are retained in various offices scattered throughout the state, and are often stored on different media, in different software formats, and in a variety of geographic coordinate systems. Second, the existing GIS software often requires a level of skill and hardware resources beyond that available to the vast majority of stakeholders, thus making GIS analysis inaccessible to them. Now, however, new programming tools are now available to enable customized interfaces to be built for existing, relatively inexpensive GIS software. This enables the full functionality of the GIS software to be made available to the resource managers and region stakeholders.

This project will be an extension of work DU has done with a private foundation to develop a similar model for one county in Northern California (Yolo). This original modeling effort served as a pilot project with the intention of expanding the effort to include additional counties as funding became available.

Proposed Scope of Work

a) Survey, collect, and develop metadata for all available spatial data. A search of governmental agencies, academic research units, and nonprofit groups will be undertaken to collect and document the available spatial data for the Delta area, both current and historical. In addition to conventional paper and digital map data, other data such as historical images and stream flow gauge data will be assembled and documented. Potential data layers may include: Hydrography, Landcover, Agricultural use, Ownership, Transportation, Soils, etc.

b) Determine User Needs. Concurrently with A., interviews and surveys with a variety of users will be conducted in order to establish an exact specification of the set of analysis tools to be included as part of the SDSS. It is critical that novice users wholly unfamiliar with GIS be able to use the SDSS in order to obtain information that meaningful and useful to them.

c) Spatial data standardization, rectification and geocoding, and documentation. Once the spatial data has been culled from Federal, state, local government and academic sources, a good deal of work will need to be done in order to geocode and mosaic all of the various data sources onto a common geographic base. This will enable the users to conduct point and click analysis and mapping operations on all data layers. The data will all be registered to the UTM coordinate system using the NAD 27 datum. In addition, the documentation for each data layer will be standardized and formatted for use in the SDSS.

d) Design and program the Spatial Data Support System. Once the spatial data base design and assembly are well underway and knowledge has been gained about the exact types of analyses to be performed, a design document can be created that will guide the programming effort of constructing the SDSS itself. In contrast to a GIS system, the SDSS needs to be seen as a total integration of both the spatial data and the tools necessary to analyze and map the spatial data.

e) Feedback and Modification Cycle. After the SDSS has been created, formal testing and feedback will be solicited from the user community. It is anticipated that considerable modification and additions will need to be made to the analytical tools segment of SDSS as users explore in depth exactly how their various analysis needs are implemented. It is anticipated that much less modification will need to be made to the spatial data, although some new data may need to be added.

f) SDSS Dissemination. Once the modifications triggered by the feedback cycle are complete, the SDSS (which is both the data as well as the programmed analysis tools working in the Arcview/Windows environment) will be mastered onto CD-ROM. If desired, the SDSS can also be posted to a WEB site and/or mastered onto the newer DVD format.

Monitoring and Data Evaluation

This SDSS development will allow agencies and citizen organizations to more freely and objectively track habitat quality and potential for habitat restoration based on weighted, quantitative information.

Implementability

DU already has considerable knowledge of the datasets that are held by various agencies and has worked cooperatively with many of these agencies on past projects. All software licenses and hardware are in currently available.

IV. Costs and Schedules to Implement Proposed Project

Budget Costs

Phase 1: GIS Database Development

Project Phase and Task	Direct Labor Days	Direct Salary & Benefits	Overhead Labor	Service Contracts	Materials & Acquisitions	Misc & Other Costs	Total Cost
Data Collection	60	$13,260			$2,100		$15,360
Data Conversion & Formatting	120	$26,520			$4,200		$30,720
Metadata Development	60	$13,260			$2,100		$15,360
Subtotal			**$5,300**				**$66,740**

Phase 2: Development of Interactive GIS Model

Project Phase and Task	Direct Labor Days	Direct Salary & Benefits	Overhead Labor	Service Contracts	Materials & Acquisitions	Misc & Other Costs	Total Cost
User Needs Assessment	80	$17,680					$17,680
Model Design	100	$22,100			$2,800		$24,900
Programming	200	$44,200			$27,000		$71,200
Model Review & Modification	60	$13,260			$2,100		$15,360
Documentation of Model	30	$6,630			$1,050		$7,680
Subtotal			**$10,400**				**$147,220**

Phase 3: Consensus Building

Project Phase and Task	Direct Labor Days	Direct Salary & Benefits	Overhead Labor	Service Contracts	Materials & Acquisitions	Misc & Other Costs	Total Cost
Interation with Potential Users	110	$27,000			$11,900		$38,900
Subtotal			**$2,700**				**$41,600**

TOTAL $255,560

Schedule Milestones:

Phase and Task	Start Date	Completion Date
Phase 1: GIS Database Development	Nov-97	Jan-99
Phase 2: Interactive GIS Model		
User Needs Assessment	Nov-97	Aug-98
Model Design	Nov-97	Dec-98
Model Programming / Review	Jan-99	Dec-99
Documentation	Sep-99	Dec-99
Phase 3: Consensus Building		
Interation with Potential Users	Jan-99	Dec-99

IV. Applicant Qualifications

Ducks Unlimited, Inc. has been involved in GIS/Remote Sensing projects for over 10 years. Initially, these efforts concentrated on using satellite imagery to inventory and monitor waterfowl habitat. Notably, DU developed sophisticated software to inventory and compile wetland acreage statistics for the Prairie Potholes region using over 30 Landsat Thematic Mapper scenes. More recently, DU has directed the mapping of over 40 million acres of landcover in Alaska as well as mapping the whole Central Valley of California using a combination of summer and winter satellite imagery. DU has just completed a SDSS for Yolo County in order to build consensus with State and Federal agencies, landowners, and private groups for the prioritization of wetland restoration and enhancement projects. Currently, DU is continuing to inventory landcover throughout the United States and is working in cooperation with other agencies to develop GIS databases and models for use in identifying and prioritizing potential wetland restoration and enhancement sites.

Currently, DU has six full time GIS/Remote Sensing Analysts and one GIS intern on staff with a wide range of skills and extensive project experience. This experience includes all aspects of data acquisition, field sampling, GIS database design, image processing, GIS modeling, and programming. To support their work, the DU GIS section is equipped with state-of-the-art hardware and software, including 5 NT workstations, 2 SUN UNIX workstations, a large-scale inkjet plotter, a full-size digitizing tablet, and writable CD-ROM drives. Software includes ARC/INFO and ArcView GIS software, ERDAS IMAGINE image processing software, Sybase SQL Anywhere database software, and Visual Basic programming software. These resources will be available as needed for the project.

The staffing for this project will consist of Director of Conservation Planning, GIS Manager, Project Manager/Analyst, Remote Sensing Analyst/Programmer, Director of State and Federal Coordination, and fourteen biological support staff. The Director of Conservation Planning will direct the biological support for the project. The GIS Manager will oversee the contract and administrative aspects of the project, and will provide oversight for the general project design and implementation. The Project Manager will be responsible for the specifics of the project design and for successful guidance of the project to completion. The Remote Sensing Analyst/Programmer will work under the direct supervision of the Project Manager. The Director of State and Federal Coordination will direct all the consensus building for the project.

Frederic Reid – Ph.D., Director of Conservation Planning. Dr. Reid has nearly 20 years experience with wetland and waterbird management, especially on migration and wintering areas. He has coordinated biological aspects of multiple GIS projects in Alaska and California for the past six years. He has published over 50 manuscripts on wetland related issues and he has extensive experience in the Central Valley and Delta systems.

Robb Macleod - GIS Manager. Mr. Macleod oversees all the GIS personnel and projects in the DU Western Regional Office. He has over five years experience in GIS and Remote Sensing. Mr. Macleod has managed and completed six landcover projects in Alaska and California covering over 30 million acres. He has extensive field experience and has used numerous types of remotely sensed data, including: Landsat TM, SPOT XS, ERS-1 RADAR, ADAR digital airborne, and CIR aerial photography.

Ruth Spell - Project Manager. Ms. Spell has worked with DU on GIS and Remote Sensing projects for the past 3.5 years. Her experience includes land cover mapping of the Lower Columbia River basin, Willapa Bay, WA, and Grays Harbor, WA. She was the project manager and senior analyst on a project developed in joint participation with the California Resources Agency, California Department of Fish and Game, Wildlife Conservation Board, and US Bureau of Reclamation to develop a wetland and riparian inventory for the Central Valley of CA using satellite imagery. Most recently, she has been involved in the development of a Wetlands Restoration Site Suitability model using Visual Basic programming language and ArcView GIS software.

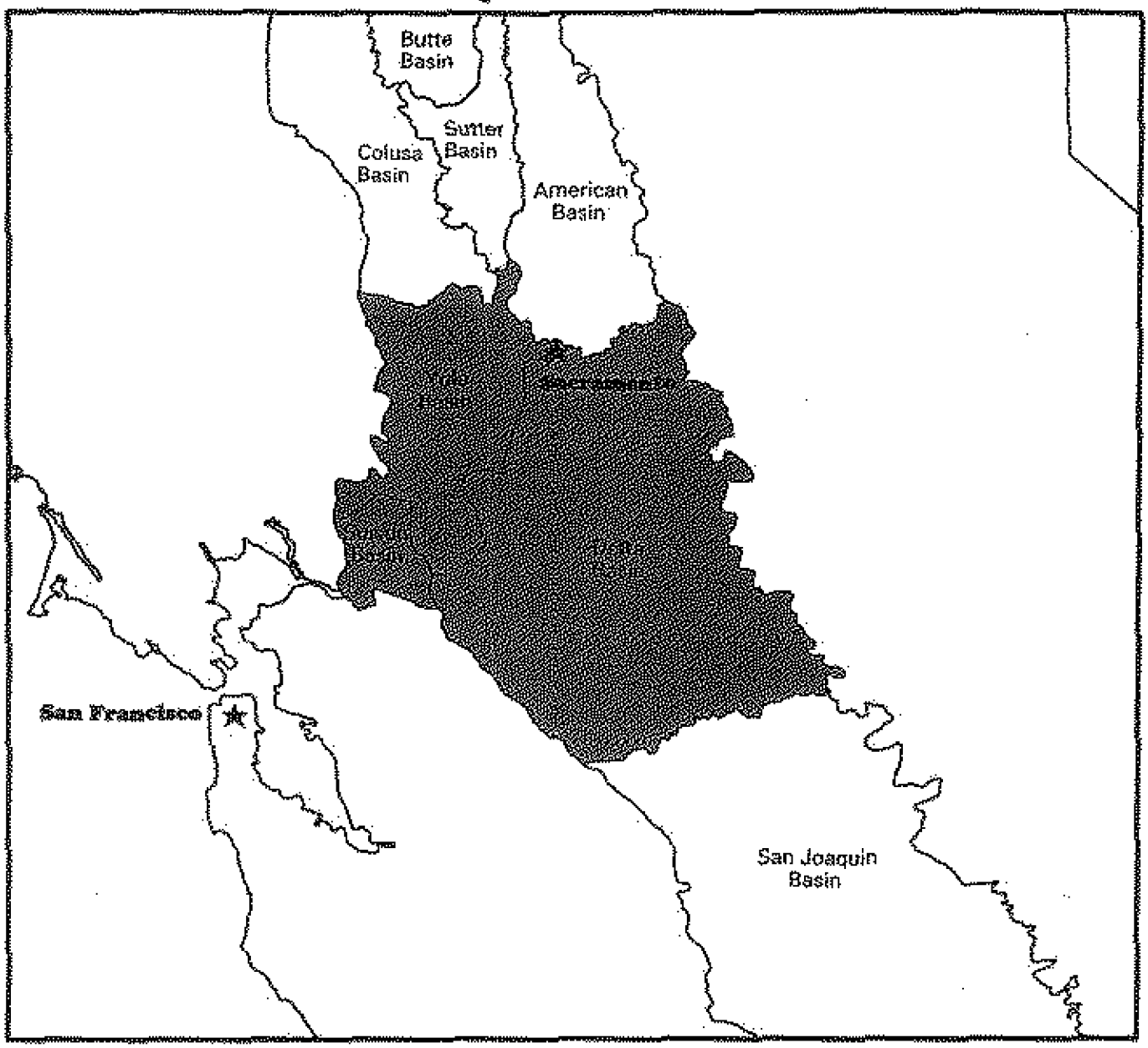
Jing Huang – Remote Sensing Analyst/Programmer. Mr. Huang is in the process of completing a Ph.D. in Forest Ecology from Oregon State University. His work there included in-depth remote sensing and GIS research and analysis as well as extensive programming experience in support of that work. Mr. Huang has over six years experience in the remote sensing and GIS field with extensive experience with spatial database design and landscape modeling. He will provide the primary programming expertise for the proposed project.

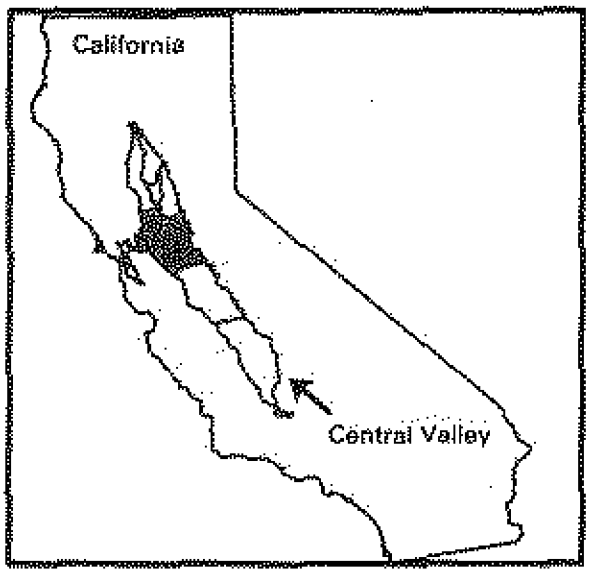
Holly Hopkins Andree – Director of State and Federal Coordination. Ms. Andree has an extensive background in consensus building with agencies and diverse citizen groups throughout California. Most recently she has worked with groups in Yolo County in an interactive SDSS program. She has many years experience working with governmental, environmental, agriculture, and development groups in the Delta.

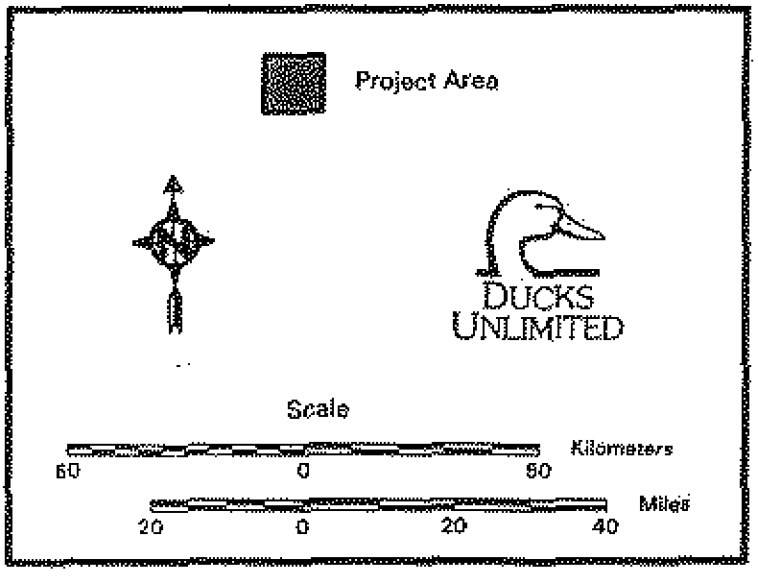
VI. Compliance with Standard Terms and Conditions

DU has administered multiple government contracts with applicable compliance standards.

Interactive Model for Wetland and Agricultural Landscapes in the Delta







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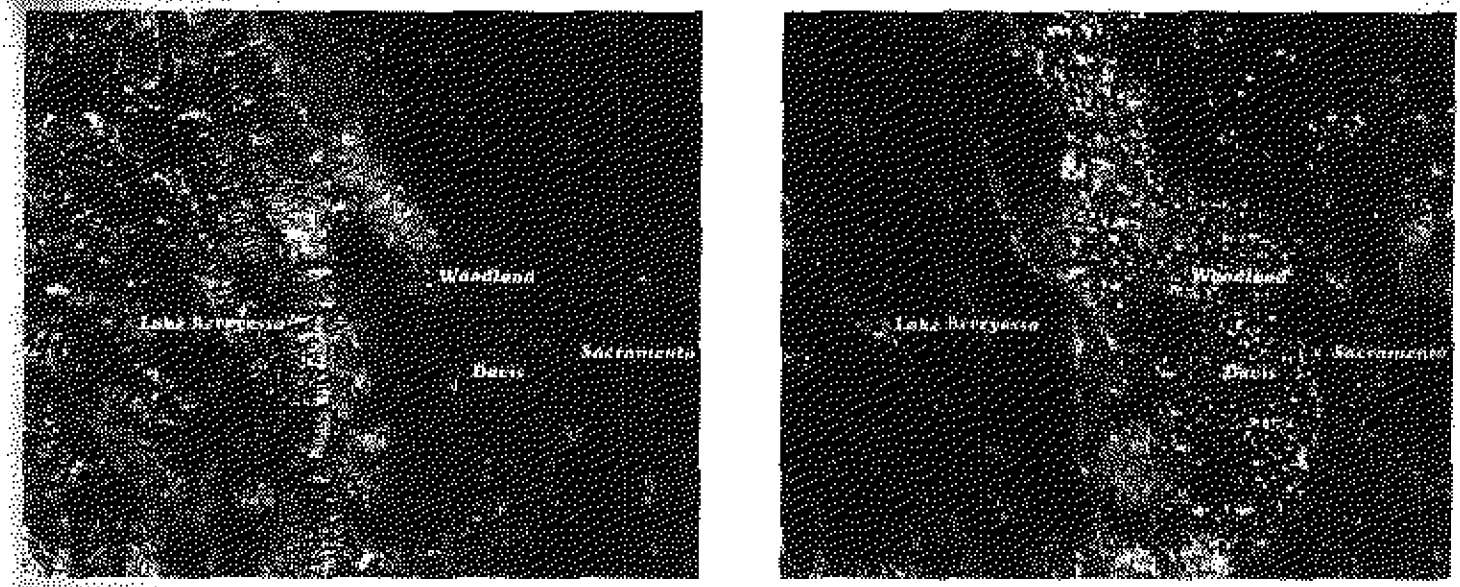
A Bird's Eye View of our Region's Environment



Landsat satellite photos taken in winter (left) and summer aid the Yolo Advanced Planning Project by providing seasonal land cover data.

Why Yolo County?

There are many reasons why Yolo County is an appropriate site for the Advanced Planning Project:

- The County has a distinguished tradition of incorporating conservation strategies into its land-use planning, and of bringing to the table a wide spectrum of land-use interests, including agriculture, community, business, government, conservation and environmental.
- Yolo County contains existing wetland resources, including the Yolo Basin, which has been identified as a priority area by environmental and conservation interests. The Advanced Planning Project will strengthen agricultural enhancement and wetlands restoration in this area.
- Wildlife-friendly farming practices are employed in the County by many growers.
- The resources of the University of California, Davis, are a natural compliment to the Yolo Advanced Planning Project.

Following data collection and inventory, the Yolo Advanced Planning Project will coordinate meetings among various land-use interest groups. The goal of the meetings: Build consensus on potential wetlands conservation and restoration areas in Yolo County.

The Yolo Advanced Planning Project establishes the framework for another chapter in Yolo County's proud tradition of protecting its natural resources.

How Does GIS Technology Aid the Planning Process?

GIS technology helps manage the complex issue of land-use mapping, allowing land-use planning decisions to be made more effectively and efficiently. In the past, a variety of maps of different types and scales had to be overlaid to work toward selecting areas for conservation and enhancement. GIS offers cutting-edge technology of the future to allow complex variables to be more efficiently handled in a computerized system.

While the Yolo County model uses satellite imagery, it has been converted to a desktop computer system that will allow interested parties to use it with minimal training and support.

Ducks Unlimited thanks The James Irvine Foundation for its generous support of this conservation effort.

For more information, contact:
Ducks Unlimited Western Regional Office
3074 Gold Canal Drive
Rancho Cordova, CA 95670-6116
916/852-2000

I-006973

Certificate of Incorporation
of
DUCKS UNLIMITED, INC.

WE, THE UNDERSIGNED, being all of full age and citizens of the United States and a majority of whom are citizens and residents of the District of Columbia, desiring to form a membership corporation pursuant to and in comformity with Chapter Five of Title Five of the Code of Laws of the District of Columbia, DO HEREBY CERTIFY:

FIRST: The name of the corporation shall be:

DUCKS UNLIMITED, INC.

SECOND: The corporation shall have perpetual existence.

THIRD: The particular business and objects of the corporation are:

To restore and perpetuate wild ducks and other wild waterfowl on the North American continent; to promote, carry on, conduct, and foster scientific research, education, training, and publication in the ornithological sciences; to establish departments of research and scientific study with particular reference to the enhancement of knowledge concerning the waterfowl of the North American continent; to establish, promote, assist, contribute to, or otherwise encourage the study of conservation, restoration, and management of wild waterfowl and its habitat; and in connection therewith, to grant scholarships, prizes and rewards;

To maintain sanctuaries for wild life, and to take, receive, hold, and convey real and personal estate necessary for the purposes of the corporation as stated in this certificate, and other real and personal property the income from which shall be applied to the purposes of the corporation.

In pursuance of, and not in limitation of the general powers conferred by law, and the objects and purposes herein set forth, it is expressly provided that this corporation shall have the following powers:

To do all such acts as are necessary or convenient to attain the objects and purposes herein set forth, to the same extent and as fully as any natural person could or might do, and as are not forbidden by law or by this Certificate of Incorporation or by the By-Laws of this corporation;

To take and hold by bequest, devise, gift, purchase, or lease, either absolutely or in trust, for any of its purposes, any property real or personal, without limitation as to amount of value, except such limitation, if any, as may be imposed by law; to transfer and convey the same, and to invest and re-invest the principal and income thereof, and to deal with and expend the principal and income of the corporation in such manner as in the judgment of the Trustees will best promote its objects; and in order properly to prosecute the objects and purposes as above set forth, the corporation will have full power and authority to purchase, lease, and otherwise acquire, hold, mortgage, convey and otherwise dispose of all kinds of property, both real and personal, both in the District of Columbia, and in any or all of the states of the United States, the territories or colonies of the United States, Alaska, the Dominion of Canada, Newfoundland, Mexico, the Central American countries, and other foreign countries, and colonies or dependencies thereof, and generally to perform all acts which may be deemed necessary for the proper and successful prosecution of the objects and purposes for which this corporation is created.

To have offices and promote and carry on its objects and purposes, within or without the District of Columbia, and in all the states, territories or foreign possessions of the United States, and in foreign countries.

To have all powers that may be conferred upon corporations formed under Chapter Five of Title Five of the Code of Laws of the District of Columbia.

The corporation shall be non-political, shall not promote the candidacy of any person seeking public office; and shall not by its activities, or any substantial part thereof, attempt to influence legislation by propaganda or otherwise.

FOURTH: The corporation shall be without capital stock. All property, real and personal, which the corporation shall receive shall be used exclusively for educational and scientific purposes, including the

restoration and perpetuation of wild ducks and other wild waterfowl on the North American continent; and no part of the income from the same shall inure to the benefit of any private shareholder or individual; provided, however, that reasonable compensation may be paid to an officer, member, or employee for services actually rendered the corporation.

FIFTH: The property of the officers, trustees and members of this corporation shall not be subject to or chargeable with the payment of corporate debts or obligations to any extent whatsoever.

SIXTH: The Board of Trustees shall have the power to make, alter, change, and amend by-laws for the government of the corporation and for the admission and withdrawal of members thereof.

SEVENTH: The meetings of the members and of the Trustees of this corporation may be held in the District of Columbia, or elsewhere within or without the confines of the United States or its possessions.

EIGHTH: The number of Trustees of the first Board of Trustees of this Corporation shall be FIVE, with power to change or increase and add to their number in accordance with provisions of the By-Laws.

The Board of Trustees shall have the power to appoint from their own members an Executive Committee consisting of all of the officers of the corporation including all vice presidents, all living past presidents and such other persons as may be designated by the Board of Trustees, five of whom, or such other number as may be specified by the By-Laws, shall constitute a quorum, who, when the Board of Trustees is not in session, shall have and shall exercise all the powers of the Board of Trustees, unless otherwise provided in the corporation's By-Laws. The Board of Trustees shall elect at its first meeting from its own members a President, and shall appoint a Treasurer and a Secretary and such other officers as may be provided for by the By-Laws, who need not be members of the Board. The Board of Trustees shall at such meeting select from their number, one-fifth of the number thereof to serve for one year, one-fifth to serve for two years, one-fifth to serve for three years, one-fifth to serve for four years, one-fifth to serve for five years; and each subsequent election of Trustees shall be for a period of one year or until their successors are duly elected and qualify. Vacancies occurring by death, resignation, or otherwise shall be filled by the remaining Trustees in such manner as the By-Laws shall prescribe and the persons so elected shall thereupon become Trustees.

NINTH: The names and post-office addresses of the Trustees until the first meeting are:

Arthur M. Bartley
500 Fifth Avenue, New York, N.Y.
Dr. John A. Hartwell
2 East 103rd Street, New York, N.Y.
Newbold L. Herrick
25 Cedar Street, New York, N.Y.
John C. Huntington
500 Fifth Avenue, New York, N.Y.
Wayne Johnson
50 Broadway, New York, N.Y.

TENTH: The Registered Office of this corporation in the District of Columbia shall be at 918-16th Street, N.W., in care of CT Corporation System, the corporation's Registered Agent, Washington, D.C.

WITNESS our hands and seals this 29th day of January One Thousand Nine Hundred and Thirty-Seven.

CHRISTABEL E. HILL
(Witness)

ERNEST O. PALAND (SEAL)
WINSTON E. HOBBS (SEAL)
JOSEPH V. McBRIDE (SEAL)

DISTRICT OF COLUMBIA: ss:

I, CHRISTABEL E. HILL, a Notary Public in and for the District of Columbia, do hereby certify that ERNEST O. PALAND, WINSTON E. HOBBS, and JOSEPH V. McBRIDE, parties to a certificate of incorporation bearing date of January 29th, 1937, and hereto annexed, personally appeared before me in said District, the said ERNEST O. PALAND, WINSTON E. HOBBS and JOSEPH V. McBRIDE being personally known to me as the persons who executed the said certificate of incorporation and acknowledged the same to be their act and deed.

GIVEN under my hand and seal this 29th day of January, 1937.

CHRISTABEL E. HILL
Notary Public

CHRISTABEL E. HILL
Notary Public
DISTRICT OF COLUMBIA
My Commission Expires July 15, 1940

STATE OF CALIFORNIA

NONDISCRIMINATION COMPLIANCE STATEMENT

STD. 19 (REV. 3-95) FMC

COMPANY NAME

Ducks Unlimited, Inc.

The company named above (hereinafter referred to as "prospective contractor") hereby certifies, unless specifically exempted, compliance with Government Code Section 12990 (a-f) and California Code of Regulations, Title 2, Division 4, Chapter 5 in matters relating to reporting requirements and the development, implementation and maintenance of a Nondiscrimination Program. Prospective contractor agrees not to unlawfully discriminate, harass or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, disability (including HIV and AIDS), medical condition (cancer), age, marital status, denial of family and medical care leave and denial of pregnancy disability leave.

CERTIFICATION

I, the official named below, hereby swear that I am duly authorized to legally bind the prospective contractor to the above described certification. I am fully aware that this certification, executed on the date and in the county below, is made under penalty of perjury under the laws of the State of California.

OFFICIAL'S NAME

James L. Ware

DATE EXECUTED

12/18/95

EXECUTED IN THE COUNTY OF

Shelby Jr

PROSPECTIVE CONTRACTOR'S SIGNATURE

Senior Group Manager

PROSPECTIVE CONTRACTOR'S TITLE

Ducks Unlimited, Inc.

PROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME

PERSONNEL POLICIES AND PRACTICES

EQUAL EMPLOYMENT OPPORTUNITY

Statement of Policy

At Ducks Unlimited, Inc. it is our policy to recruit and hire employees without regard to or discrimination because of age, race, creed, color, national origin, sex, handicap or veteran status. This policy of nondiscrimination applies to all phases of employee relations – hiring, compensation, performance rating, promotion, transfer and other personnel matters.

Our employment objective is to select individuals who meet the organization's high standards of character, education and occupational qualifications; who can carry out the organization's work competently; who have capacity for growth; and, who will become an active part of our organization.

We know that our strength and future growth depend directly upon the contribution made by each person within our organization. Productivity and efficiency result from real job satisfaction and from the opportunity each person has for his or her individual self-development. Our employment policy is designed to:

- Place each employee, insofar as practicable, in a position which best suits the individual's natural and acquired aptitudes and skills.
- Offer each employee opportunity for self-development and advancement through training and on-the-job experience.
- Accord fair and equitable treatment to every employee at all times.
- Recognize the importance of the work of each employee to the overall success of the organization.

SEXUAL HARASSMENT

Statement of Policy

Ducks Unlimited, Inc. maintains a strict policy against sexual harassment. **Simply put, sexual harassment will not be tolerated on the part of any employee.** All employees are responsible for assuring that the workplace is free from sexual harassment. Sexual harassment is defined as unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature, where:

- Submission to the advances is made either explicitly or implicitly a term or condition of employment.
- Submission to or rejection of the advances is used as the basis for making employment decisions.
- Such conduct interferes with an individual's work performance or creates an intimidating, hostile or offensive working environment.

All employees should avoid any action or conduct that might be viewed as sexual harassment. Approval of, participation in, or acquiescence in conduct constituting sexual harassment will be considered a violation of this policy. If any employee believes that he or she has been subject to sexual harassment at work by anyone, including supervisors, co-workers or visitors, he or she should report this immediately to his or her immediate supervisor or Human Resources. Sexual harassment complaints will be handled with as much confidentiality as possible. There will be no retaliation against any employee who reports a claim of sexual harassment or against any employee who is a witness to the harassment. An immediate investigation will be conducted in an attempt to determine all the facts concerning the alleged harassment. In making this investigation, every effort will be made to be fair to all parties involved. If it is determined that sexual harassment has occurred, corrective action will be taken, up to and including reprimand, discharge, or other appropriate action.

If it is determined that no sexual harassment has occurred, or there is not sufficient evidence to conclude that harassment has occurred, this determination will be communicated to the employee who filed the complaint.

DRUG FREE WORKPLACE PROGRAM

Statement of Policy

Because substance abuse poses a serious threat to our employees, their families and to the entire organization, Ducks Unlimited has established this policy in an effort to promote and maintain a drug-free work environment.

The ultimate goal of this policy, however, is to balance respect for individual privacy with the organization's need to maintain a safe, productive, drug-free work environment for all employees; maintain safety and security at DU's community-based events, as well as at the facilities and properties in the communities where we are located; and, provide a quality of service to the organization's members, as well as non-members and visitors, in a fashion consistent with the high standards set by the Board of Directors of Ducks Unlimited, Inc.

Standard of Conduct

As a Standard of Conduct for employees of Ducks Unlimited, employees will not be permitted to possess, consume, or distribute drugs, controlled substances or abuse alcohol in the workplace or report to work or perform their duties under the influence of alcohol or with drugs present in their system. To allow otherwise jeopardizes the safety of our fellow employees, our members, our facilities, and the communities which we rely upon for support. Any employee determined to be in violation of this policy or standard will be subject to disciplinary action, which may include termination, even for the first offense.

Drug and Alcohol Abuse Screening/Testing

Ducks Unlimited recognizes that carefully selected tests and testing procedures have a proper role in any comprehensive substance abuse program, as do properly conducted searches of the effects, vehicles and persons of employees, contractors or visitors.

- **Job Applicants**

As a condition of regular employment all applicants must complete a drug screen test. If test results are confirmed positive, the employment offer will be withdrawn.

- **Current Employees**

The Company utilizes screening practices to identify employees who use illegal drugs or abuse alcohol. It is a condition of continued employment for all employees to submit to a drug screen test when:

a. there is sufficient cause to believe an employee is under the influence of alcohol or has drugs present in their system; or,

b. there is any mishap or accident involving an employee during business hours or while on Company business in which injury to individuals or damage to property occurs as a result of the impaired employee's involvement.

Failure to submit to required medical or physical examinations/tests is considered misconduct, and as such, grounds for disciplinary action, including termination.

General Procedures

Any employee reporting for work visibly impaired is unable to properly perform required duties and will not be allowed to work. If, in the opinion of the employee's supervisor the employee is considered impaired, the employee will be transported by taxi or an alternative safe transportation mode to his/her home or a medical facility. **An impaired employee will not be allowed to operate or drive any vehicle during business hours or while on official Company business, or any vehicle rented, leased, owned or otherwise intended for Company use or business.**